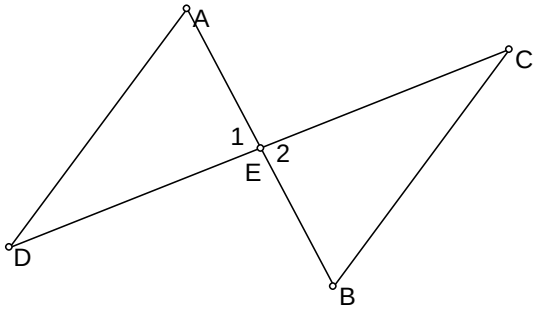
Name_____ Date_____

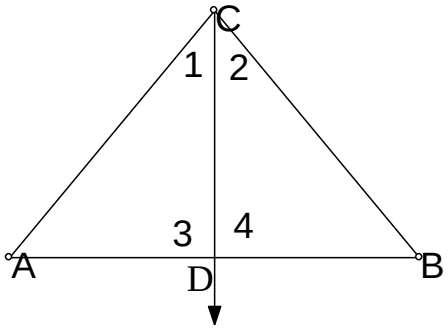
201 Chapter 4: Proofs Using CPCTC (4.6)

1. Given: E is the midpoint of $\overline{AB}$ and $\overline{CD}$
   Prove: $\angle D \cong \angle C$



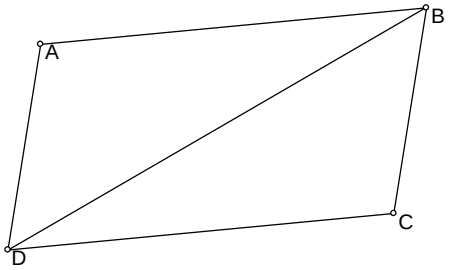
Statements	Reasons

2. Given: $\overrightarrow{CD}$ bisects $\angle ACB$; $\angle 3 \cong \angle 4$
   Prove: $\angle A \cong \angle B$



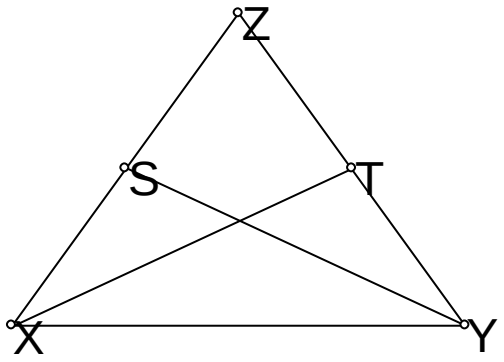
Statements	Reasons

3. Given: $\overline{AB} \cong \overline{CD}$; $\overline{AB} \parallel \overline{CD}$
   Prove: $\overline{AD} \cong \overline{CB}$



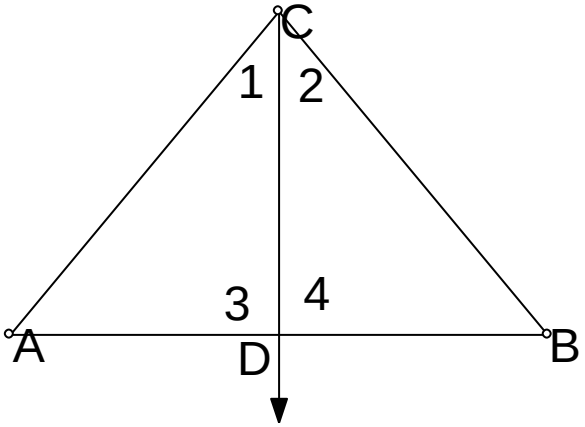
Statements	Reasons

4. Given: $\overline{XZ} \cong \overline{YZ}$ (Hint: separate the triangles)
   $\overline{ZT} \cong \overline{ZS}$
   Prove: $\angle YSZ \cong \angle XTZ$



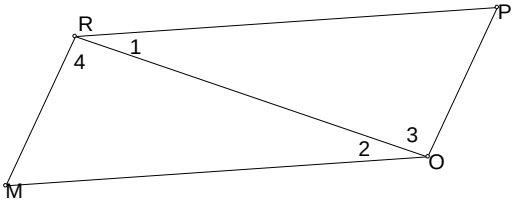
Statements	Reasons

5. Given: $\overline{AC} \cong \overline{BC}$; $\angle 1 \cong \angle 2$
   Prove: $\overline{DA} \cong \overline{DB}$



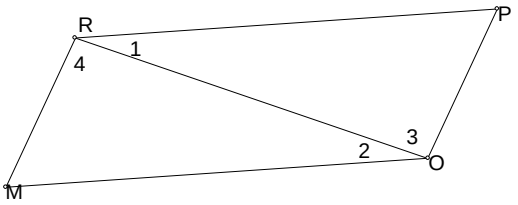
Statements	Reasons

6. Given: $\overline{MO} \cong \overline{PR}$; $\overline{RM} \cong \overline{OP}$
   Prove: $\angle 1 \cong \angle 2$



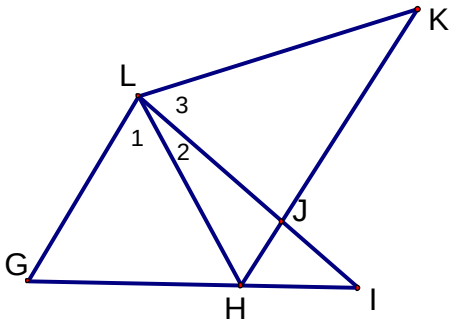
Statements	Reasons

7. Given: $\overline{RP} \parallel \overline{OM}$; $\overline{RM} \parallel \overline{PO}$
Prove: $\overline{RM} \cong \overline{OP}$



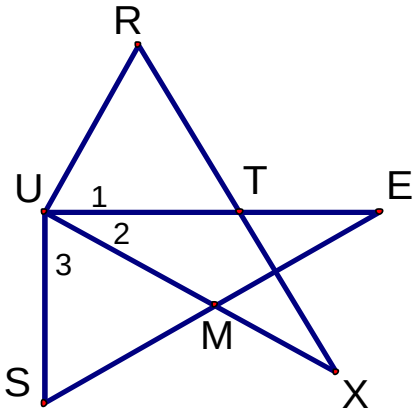
Statements	Reasons

8. Given: $m\angle 1 = m\angle 3$; $\overline{LG} \cong \overline{LH}$; $\angle G \cong \angle LHJ$
Prove: $\Delta GLI \cong \Delta HLK$



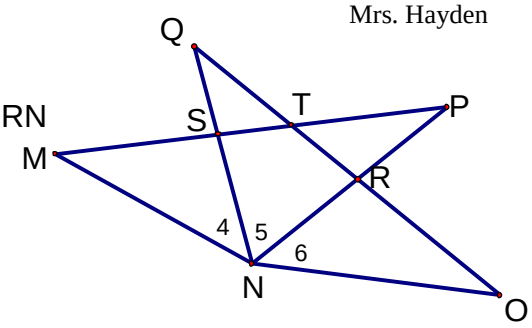
Statements	Reasons

9. Given: $\overline{RU} \perp \overline{UM}$; $\overline{UT} \perp \overline{US}$; $\overline{UT} \cong \overline{UM}$; $\overline{UR} \cong \overline{US}$
Prove: $\overline{TR} \cong \overline{MS}$



Statements	Reasons
1. ~	1. Given
2._____	2.(The Complement Theorem) If the non-adjacent sides of two acute $\angle$s are $\perp$, then the $\angle$s are complementary.
3._____	3. (same as #2)
4. $\angle 1 \cong \angle 3$	4. _____
5. $\Delta UTR \cong \Delta UMS$	5._____
6. _____	6._____

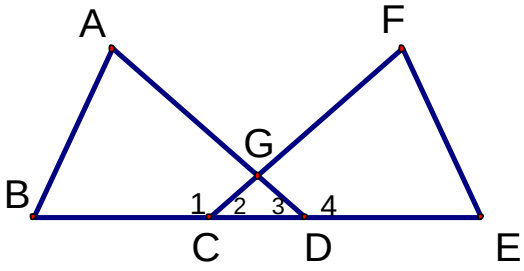
10. Given: $m\angle 4 = m\angle 6$; $\overline{MN} \cong \overline{NO}$; QS = PR; SN = RN
Prove: $\Delta MNP \cong \Delta ONQ$



Statements	Reasons

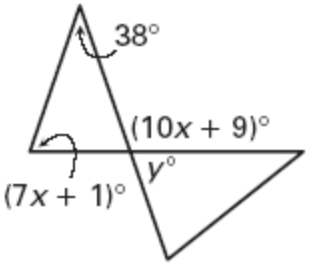
11. Given: $\underline{BC} = \underline{DE}$; $\angle 1 \cong \angle 4$; $\overline{AD} \cong \overline{FC}$
Prove: $\overline{AB} \cong \overline{FE}$

Statements	Reasons



Solve for x and/or y.

12.



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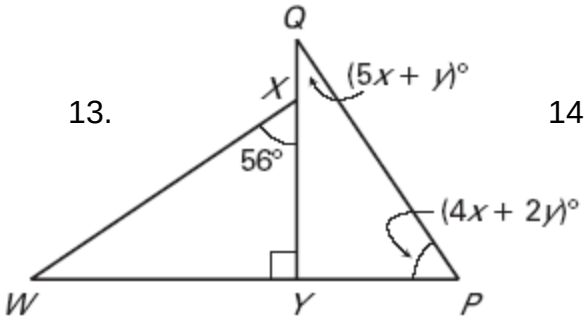

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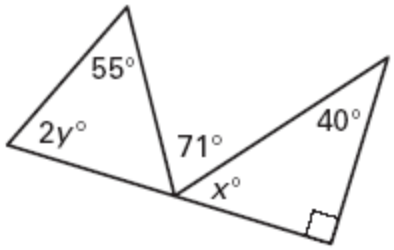
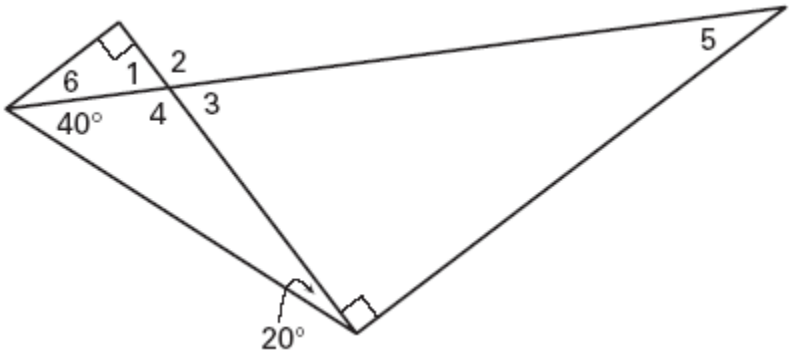


15. Find all of the measurements of the numbered angles.

m∠1 = _____
m∠2 = _____
m∠3 = _____
m∠4 = _____
m∠5 = _____
m∠6 = _____



16. Find all of the values of x that make the two triangles congruent.